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	First Named Inventor	Steven Atkins
	Art Unit	N/A
	Examiner Name	N/A
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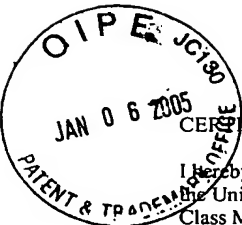
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of

STEVEN R. ATKINS, ET AL.

Serial No.: 10/784,137

Filed: February 20, 2004

For: IMPROVEMENTS IN OR  
RELATING TO A FITTING FOR A  
HARNESS

Examiner: N/A

Group Art Unit:

Docket No. FORRE 67592

December 30, 2004

Los Angeles, California 90045

SUBMISSION OF PRIORITY DOCUMENTS

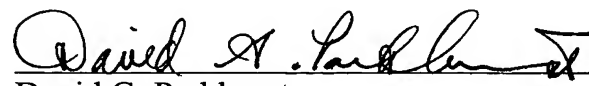
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Dear Sir:

Enclosed herewith are certified copies of British Patent Application Nos. 0308440.7 and 0304041.7 which will establish applicant's claim of priority in the above-identified application.

Respectfully submitted,

FULWIDER PATTON LEE & UTECHT, LLP

By:   
David G. Parkhurst  
Reg. No. 29,422

DGP/rvw

Encls: Return Postcard and Priority Documents

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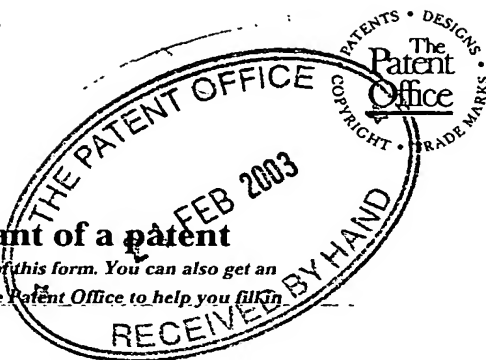
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# 1/77

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The Patent Office

24FEB03 E787016-1 000329  
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1. Your reference

P17246GB-SJP/jw

2. Patent application number

(The Patent Office will fill in this part)

21 FEB 2003

0304041.7

3. Full name, address and postcode of the or of each applicant (underline all surnames)

RWO (Marine Equipment) Ltd.  
231, Church Road,  
BENFLEET,  
Essex SS7 4QW

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

UK (see A/d/a n/a/s)

8124430001

4. Title of the invention

"IMPROVEMENTS IN OR RELATING TO A FITTING FOR A HARNESS"

5. Name of your agent (if you have one)

Forrester Ketley & Co.

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

Forrester House  
52 Bounds Green Road  
London  
N11 2EY

Patents ADP number (if you know it)

133001

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country

Priority application number  
(if you know it)

Date of filing  
(day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing  
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8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

Yes

- a) any applicant named in part 3 is not an inventor, or
  - b) there is an inventor who is not named as an applicant, or
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Patents Form 1/77

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Abstract

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Request for preliminary examination and search (Patents Form 9/77) 1

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Any other documents (please specify)

11. I/We request the grant of a patent on the basis of this application.

Signature  
Forrester Ketley & Co.

Date  
21 February, 2003

12. Name and daytime telephone number of person to contact in the United Kingdom  
Simon J. PARRY  
(020) 8889 6622

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PATENTS ACT 1977

P17246GB-NHF/SJP/jw

5

**DESCRIPTION OF INVENTION**

10 **"IMPROVEMENTS IN OR RELATING TO A FITTING FOR A HARNESS"**

15 **THE PRESENT INVENTION** relates to a fitting for a harness. More particularly, the present invention is directed towards a fitting secured to or securable to a harness, and being connectable to a tether.

20 Harnesses configured to be worn around the body of a person, and being connectable to the end of a tether are well known. Harnesses of this general type are often used in a wide range of sports or outdoor pursuits. One particular area in which harnesses of this type are often used is in the sport of sailing.

25 It is important when sailing a sail boat for the crew of the boat to position their weight appropriately in order to balance the force of the wind acting upon the sails of the boat. This is important not only to prevent the boat capsizing, but also to ensure that the boat is sailing with its mast as close to the vertical position as possible to ensure that the hull of the boat is working efficiently through the water.

As will be appreciated, in windy conditions it is therefore important for the crew of a sail boat to position their weight as far outboard as possible in order to maximise the righting movement of their body weight. It is therefore common in smaller sail boats such as high performance dinghies and small catamarans to use a "trapeze" arrangement in order to position the body weight of one or more crew member as far outboard as practicable. A "trapeze" arrangement essentially comprises a tether in the form of a length of wire or rope anchored to the mast of the sail boat at a position spaced significantly above the foot of the mast. The tether line, or "trapeze wire" as it is commonly known, carries a loop of any convenient shape at its lowermost end. A crew member using a trapeze wire wears a body harness which is typically provided with a downwardly turned hook, although an upwardly turned hook is equally possible. The hook is provided at the front of the harness in the waist region of the harness and is configured to hook onto the loop carried by the lowermost end of the trapeze wire. The crew member is therefore able to attach the lower end of the trapeze wire to his or her trapeze harness using the downwardly turned hook, and thereafter move to a position in which he or she effectively hangs from the trapeze wire with his or her feet bearing against the gunwhale of the boat or against an outermost surface of a rack of wing extending outboard from the gunwhale. A person "trapezing" in this manner typically adopts a "standing" position in which his or her body extends outboard from the surface against which his or her feet are resting. Of course, it is equally possible for the hook to be provided on the edge of the trapeze wire, and for the loop to be provided on the harness.

In order to ensure secure connection between the trapeze wire and the harness to prevent accidental disengagement the hook provided on the above-

mentioned type of harness is fixed with respect to the body of the harness in order to prevent inadvertent unhooking of the trapeze wire.

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It has been found that known trapeze harness arrangements of the  
5 general type described above can suffer from disadvantages, particularly where  
the crew member wishes to unhook the trapeze wire from their harness in an  
emergency. Because of the nature of the types of sail boats which use trapeze  
arrangements, the boats can be unstable and/or can travel at considerable speed.  
It is not uncommon for these type of boats to capsize or change altitude very  
10 quickly. It has therefore been found that in some instances of capsize or other  
violent movements, trapezing crew members can become trapped against the  
rigging of the boat or become trapped under the hull or sails of the boat when  
capsized. There have been instances where crew members trapped in such  
positions have been unable to unhook their harnesses from the trapeze wires,  
15 therefore preventing easy escape.

It is therefore an object of the present invention to provide an improved  
fitting for a harness and a harness provided with such a fitting. However, the  
arrangement of the present invention is suitable for use with trapeze harnesses  
20 in the sport of sailing, it should be appreciated that the invention can also find  
application in many other areas where a harness is worn such as, for example,  
kite-surfing, wind-surfing, paragliding, mining, pot-holing, window cleaning  
and forestry.

25 According to a first aspect of the present invention, there is provided a  
fitting for a harness, the fitting comprising: a first part secured to or securable  
to a harness, a second part connectable to a tether, and a mechanism to  
releasably interconnect the first and second components, one of said parts  
having a pair of opposed locking apertures or recesses and said mechanism

comprising: a pair of locking members each having a rounded or tapered locking part sized to be received within a respective said locking aperture or recess; and a locking element moveable between a locking position and a release position, the locking element being configured to urge each locking member into a position in which its locking part is received within a respective said locking aperture or recess when in said locking position but to allow each locking member to move out of said respective locking aperture or recess when in said release position.

10 Preferably each said locking member is constrained for linear movement towards and away from each respective locking aperture or recess.

Preferably, said locking element is biased towards said locking position.

15 Conveniently, said locking element is biased by a spring.

Advantageously, each said locking aperture or recess defines a respective peripheral seat, and the rounded or tapered locking part of each said locking member is sized to engage a respective said seat when urged into said respective locking aperture or recess but not to pass completely through said seat.

Preferably, each said peripheral seat is substantially circular.

25 Conveniently each said locking member is a ball.

Advantageously, the fitting comprises a plurality of said pairs of locking apertures or recesses and a plurality of respective pairs of locking members.

Conveniently, wherein the locking element is arranged to urge the locking members of the or each said pair of locking members apart from one another into said respective locking apertures or recesses.

5

Preferably, each locking member is provided in a linear channel to restrict the locking member to substantially linear movement.

Advantageously, said locking element is arranged for movement  
10 between said locked and release positions along an axis substantially perpendicular to the axis of each said channel.

Conveniently, said locking element has a respective bearing surface to bear against each said locking member when the locking element is in said  
15 locking position, and a respective recess to receive each said locking member when the locking element is in said release position.

Preferably, said locking apertures or recesses are provided in said second part, and said locking members and said locking element are provided on said  
20 first part.

Advantageously, each said locking member is held captive between said locking element and a respective retaining aperture formed in said first part, each said retaining aperture being sized to prevent the respective locking  
25 member from passing completely therethrough, whilst allowing the respective locking member to project sufficiently therethrough to engage a respective seat defined on the second part.

Conveniently, each said retaining aperture is substantially circular and has a smaller diameter than each said seat.

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Preferably, said second part has a hook for connection to said tether.  
5 However, other types of connection are also possible.

Advantageously, the fitting has an actuator button configured to urge said locking element towards said release position when pressed or pulled.

10 Conveniently, said actuator button is formed as part of said locking element.

Preferably, the fitting comprises a guard arrangement configured to extend at least partly around said actuator button to prevent the button from  
15 being accidentally pressed.

According to another aspect of the present invention, there is provided a harness having a fitting as defined above.

20 So that the invention may be more readily understood, and so that further features thereof may be appreciated, the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

FIGURE 1 is a perspective view from the front and below of a fitting in  
25 accordance with the present invention for attachment to a harness;

FIGURE 2 is a perspective view from above and the front of the fitting illustrated in Figure 1;

FIGURE 3 is the view corresponding generally to that of Figure 1, but illustrating two connectable parts of the fitting separate from one another;

FIGURE 4 is a perspective view from behind of one of the parts illustrated in Figure 3;

FIGURE 5 is a perspective view of a locking mechanism of the fitting;

FIGURE 6 is a perspective view of two component parts of the locking mechanism illustrated in Figure 5;

FIGURE 7 is a view corresponding generally to that of Figure 5, but illustrating one component part of the mechanism removed so that the operative parts of the mechanism are visible;

FIGURE 8 is a view corresponding generally to that of Figure 7, illustrating parts of the mechanism in an alternate configuration; and

FIGURE 9 is a perspective view of the fitting illustrated in Figure 1, showing the mechanism being actuated.

With reference to Figures 1 to 3, there is illustrated a fitting 1 in accordance with the present invention. As will be apparent from Figure 3 in particular, the fitting 1 comprises two main parts 2,3 which are releasably connectable to one another. Figure 3 illustrates the two main parts 2,3 in a condition in which they are released and separate from one another, whilst Figures 1 and 2 illustrate the two main parts 2,3 connected to one another.

20

The first part 2 of the fitting comprises an elongate frame 4 which is bent from a length of rigid metal bar. The frame 4 defines a pair of rearwardly directed arms 5, each of which has a generally rectangular configuration and comprises a pair of rearwardly directed bar portions 6 which are interconnected by a terminal bar portion 7. Spaced slightly inwardly from each terminal bar portion 7, there is provided a securing bar 8 which extends between the two bar portions 6 of each arm 5. Each securing bar 8 is welded at each end to a respective bar portion 6. An elongate slot 9 is thus defined between the terminal bar portion 7 and the securing bar 8 of each arm 5.

The central region of the frame 4 comprises a pair of central bar portions 10, each of which extends between a bar portion 6 of each arm 5.

5        The frame 4 defining the two arms 5 is mounted centrally on a base plate 11 which is generally square or rectangular, but which has two opposed side regions bent inwardly to define a pair of inwardly directed flanges 12. Each flange 12 has a linear inner edge 13 and defines a respective elongate channel 14 between itself and the rear part of the base plate 11. The frame 4 is secured  
10 to the base plate 11 by four welds 15 in the regions of the ends of each inwardly directed flange 12.

A smaller rectangular frame 16 is mounted to the base plate 11, and is oriented such that its longitudinal axis is generally perpendicular to the  
15 longitudinal axis of the frame 4 defining the pair of arms 5. The smaller frame 16 is mounted to the base plate 11 such that its two longitudinal bar portions 17 are each received within a respective channel 14 defined by the inwardly directed flanges 12. The smaller frame 16 is again welded to the base plate. As illustrated most clearly in Figure 2, the top region of the frame 16 is provided  
20 with a forwardly extending arcuate loop 18 which is welded to and extends between the two longitudinal bar portions 17 of the smaller frame 16. A similar loop 19, having a larger radius of curvature, is provided to extend downwardly from the frame 4 in the region of the base plate 11.

25        Secured, again by welding, to the base plate 11, between the two inwardly turned flanges 12, is an elongate channel 20 of substantially rectangular cross section. The channel 20 comprises a front wall 21 and a pair of side walls 22. Each side wall 22 extends forwardly from the base plate 11 at a position spaced slightly inwards from the longitudinal edge 13 of a respective



flange 12. Each side wall 22 is provided with two-spaced apart circular retaining apertures 23 (Figure 3), the purpose of which will become clear hereinafter.

5           The rectangular channel 20 encloses a locking mechanism which will be described in more detail hereinafter.

          Having regard to Figures 3 and 4, it will be seen that the second part 3 of the fitting 1 essentially comprises a hook 24 bent from a length of metal bar and  
10   secured, by a weld 25, to a rectangular flat plate 26. From each longitudinal edge 27 of the plate 26, extends a rearwardly directed side wall 28. The two side walls 28 are parallel with one another and are each provided with two spaced-spaced circular locking apertures 29. The apertures 29 formed through one side wall 28 are each aligned with a respective aperture formed through the  
15   opposite side wall 28. The apertures 29 provided through each side wall 28 are spaced from one another by a distance equal to the spacing between the apertures 23 provided to the side walls 22 extending forwardly from the base plate 11. However, the apertures 29 formed to the side walls 28 of the hook  
20   part 3 each have a slightly larger diameter than the apertures 22 carried by the first part 2. The edge of each aperture 29 defines a circular seat 29a, the purpose of which will become clear hereinafter.

          As indicated above, the channel 20 provided on the base plate 11 houses a locking mechanism. The locking mechanism will now be described, in more  
25   detail, with reference to Figures 5 to 8.

          As illustrated in Figure 5, the locking mechanism 30 takes the form of a generally rectangular cartridge 31 which is sized to be received within the channel 20 as indicated generally in Figure 3.

The cartridge 31 comprises a pair of substantially identical plastic mouldings 32, as illustrated in Figure 6, which define the cartridge 31 when positioned against one another as illustrated in Figure 5. Each cartridge  
5 moulding 32 has generally rectangular configuration and has a planar outer surface 33. From one end of each cartridge moulding 32 extend a pair of resiliently deformable fingers 34, each of which terminates with an outwardly directed projection 35.

10 As will be seen from the right hand cartridge moulding 32 illustrated in Figure 6, the inner surface of each cartridge moulding 32 is provided with a centrally located channel 36 of generally rectangular configuration. At one end of the channel 36, there is provided an upwardly extending projection 37. On either side of the channel 36, a pair of spaced apart rectangular recesses 38 are  
15 provided, each of which is open at its outermost end.

Along the longitudinal edges of the cartridge moulding 32, there are provided raised regions 39 which are substantially level with the upstanding projection 37. A linear inwardly directed shoulder 40 is defined by the inner  
20 surface of each raised portion 39.

As illustrated in Figure 7, the two cartridge mouldings 32 serve to house the operative parts of the mechanism 30 which include a generally rectangular metal locking element 41, a helically wound spring 42, and four locking  
25 members which, in the arrangement illustrated, take the form of balls 43.

The locking element 41 is generally planar but is bent forwardly at one end to define a lip 44 which will serve as an actuating button. A rectangular slot 45 is formed through the locking element 41, the width of the slot being sized

to receive the projection 37 as a sliding fit. The width of the locking element 41 is such that the locking element 41 as a whole can be mounted on the cartridge moulding 32 illustrated in Figure 7 so as to be a close sliding fit between the opposed shoulders 40, with the projection 37 received within the slot formed through the locking element 41. With the locking element 41 located with respect to the cartridge moulding 32 such that the projection 37 abuts the ends of the slot 45 spaced furthest from the actuating button 44, the spring 42 can be inserted through the slot 45 and into the channel 36 so as to engage the end of the channel 36 at one end, and the end of the slot 45 proximal to the actuating button 44 at the other end.

As also illustrated in Figure 7, along each longitudinal edge of the locking element 41, there are provided a pair of recesses 46. Each recess 46 is generally arcuate and is configured to have a ramp surface 47 extending outwardly and away from the actuating button 44, to adjoin the longitudinal edge of the locking element 41.

As clearly illustrated in Figure 7, each ball 43 is sized to be received within a respective recess 38 provided along the side edges of the cartridge moulding 32. With the locking element 41 urged by the spring 42 towards the locking position as illustrated in Figure 7, each ball 43 bears against a longitudinal edge surface of the locking element 41.

When the components illustrated in Figure 7 are assembled as shown, the other cartridge moulding 32 can then be positioned over the first cartridge moulding 32 such that the locking element 41, the spring 42 and the balls 43 are all located between the two cartridge mouldings 32 as illustrated in Figure 5. When the locking mechanism 30 is assembled as shown in Figure 5, the two cartridge mouldings 32 can be secured to one another by way of a peg or spigot

carried by one moulding 32, which is received within a corresponding aperture provided on the other moulding. Each recess 38 of one cartridge moulding 32 is aligned with a respective recess 38 of the other cartridge moulding 32, hence defining a channel 48 in which each ball 43 is received. However, it should be appreciated that the balls 43 are not, in the configuration illustrated in Figure 5, held captive within the respective channels 48.

The locking mechanism 30, when assembled as illustrated in Figure 5 is then inserted into the channel 20 provided on the first part 2 of the fitting 1. The cartridge 31 of the locking mechanism 30 is sized to be a close sliding fit within the channel 20 and so may be inserted into the channel from the top end, underneath the arcuate loop 18. In order to insert the cartridge 31 into the channel 20 in this way, the deformable fingers 34 of each cartridge moulding are depressed inwardly, and the balls 43 must be held in place to prevent them falling out of the open channels 48. When the cartridge 31 is fully inserted into the channel 20, then the resilient fingers 34 are free to move outwardly under their resilience such that the projections 35 engage the lower end of the respective side walls 22, as illustrated in Figure 3. In this fully inserted position, the actuating button is located generally behind the arcuate loop 18. The loop 18 thus serves as a guard arrangement extending around the actuating button 44 to prevent accidental actuation of the button 44.

As illustrated most clearly in Figure 3, when the cartridge 31 of the locking mechanism 30 is fully inserted into the channel 20 as described above, the transverse channels 48 of the locking mechanism 30 each become aligned with a respective aperture 23 formed through the side walls 22 projecting forwardly from the base plate 11. The apertures 22 are sized to prevent the balls 43 passing completely therethrough and hence serve to hold the balls 43 captive within their respective channels 48.

The normal position of the operative parts of the mechanism 30 are generally as indicated in Figure 7, in which the spring 42 urges the locking element 41 into a locking position in which the upstanding projection 37 engages the end of the slot 45 remote from the actuating button 44. In this position, the balls 43 engage an outermost edge surface of the locking element 41 and are urged into the apertures 23 provided to the side walls 22 so as to project outwardly through the apertures 23. However, when the actuating button 44 is depressed, so as to slide the locking element 41 between the two cartridge mouldings 32 towards a release position (only one cartridge moulding 32 being illustrated in Figure 8 for convenience), against the action of the spring 42, the recesses 46 defined along the longitudinal edges of the locking element 41 each become aligned with a respective ball-receiving channel 48, and hence in this configuration, the balls 43 are each able to move inwardly relative to the cartridge 31, out of engagement with the apertures 23. When the actuating button 44 is subsequently released, the spring 42 urges the locking member 41 back towards the locking position illustrated in Figure 7 and hence the ramp surfaces 47 of each recess 46 serve to urge the respective balls 43 outwards again towards the position illustrated in Figure 7, in which, when the cartridge is inserted in the channel 20, each ball 43 is received within a respective aperture 23.

It will therefore be appreciated that when the locking mechanism 30 is assembled as indicated in Figure 3, the actuating button 44 can be depressed, as indicated in Figure 9, and the balls 43 will each be allowed to move inwardly so as to no longer project through the apertures 23. In this condition, the hook part 3 can be mounted on the main part 2 so that the plate 26 of the hook part bears against the front wall 21 of the channel 20. The two rearwardly extending side walls 28 of the hook part each bear against a respective side wall 23 extending

forwardly from the base wall 11 and are received between the respective side walls 23 and the inner edge 13 of the adjacent flange portion 12. In this position, the apertures 29 formed through the side walls 28 of the hook part 3 each become aligned with a respective aperture 23 provided on the main part 2.

5 When the actuating button 44 is subsequently released, the balls 43 are driven outwardly so that they project through the apertures 23 and into the apertures 29 formed on the hook part 3. This configuration is illustrated in Figures 1 and 2.

Because the apertures 29 of the hook part 3 have a smaller diameter than

10 the apertures 23 of the main part 2, each ball 43 is urged into engagement with a respective peripheral seat 29a defined by the apertures 29, and hence serve to lock the hook part 3 to the main part 2 in a substantially rigid manner as illustrated in Figures 1 and 2.

15 The main part 2 of the fitting can be secured to a body harness such as, for example, a trapeze harness or wind-surfing harness such that the base plate 11 is located centrally, above the groin region of the harness. The two arms 5 extend outwardly around the waist region of the harness and the slots 9 each allow a respective webbing strap or the like to pass therethrough to provide

20 secure connection of the main part 2 to the harness. When mounted to the harness in this way, the fitting 1 presents the hook 24 in a convenient position to be clipped onto a tether line such as, for example, a trapeze wire.

As described above, the four balls 43 are each driven outwardly into

25 engagement with respective seats 29a defined by the apertures 29 on the hook part 3 and hence provide a secure connection between hook part 3 and the main part 2. In this configuration, the fitting 1 can be used to support the weight of a person wearing the harness, when hanging from a tether line clipped onto the hook 24. However, should the person find themselves in difficulty or danger,

requiring urgent detachment from the tether, the person can simply depress the actuating button 44 as described above, which allows the four balls to move inwardly, hence moving out of engagement with the peripheral seats 29a defined by the aperture 29 as the hook part 3 is pulled away from the main part 2 under the force applied by the tether. The main part 2 of the fitting 1 and the hook part 3 hence become disconnected from one another allowing the person wearing the harness to become released from the tether line in an emergency.

Because the balls 43 each present a rounded part for engagement with the peripheral seats 29a, the seats 29a are prevented from snagging on the balls as the hook part is pulled away from the main part 2. The seats 29a ride smoothly over the rounded surface of the balls 43, therefore ensuring that the balls 43 are properly urged inwardly. However, it should be appreciated that the locking members do not have to take the form of balls but instead could take the form of other convenient shapes such as, for example an elongate spigot having a rounded end surface, or a conical or frustoconical member presenting a tapered locking surface for engagement with the peripheral seats 29a.

Whilst the present invention has been described with reference to a specific embodiment, it should be appreciated that various modifications or alterations could be made to the above-described arrangement, without parting from the scope of the present invention. For example, whilst the above-described arrangement has two pairs of opposed apertures formed on the hook-part 3, it is envisaged that the arrangement could be modified to have only one pair of opposed apertures on the hook-part 3, or even more than two pairs of opposed apertures. Of course, in each of these variants, the two apertures of each pair must each be associated with a respective ball provided in the locking mechanism.

Also, whilst the embodiment described above is provided with locking apertures on the hook-part 3 to define the peripheral seats 29a, the apertures could be replaced with recesses defining the peripheral valve seats 29a, in which case the balls 43 would each be received in a respective said recess when engaging said peripheral seat, so as not to be visible when the hook-part 3 is connected to the main part 2 of the fitting 1.

10

15



CLAIMS

1. A fitting for a harness, the fitting comprising: a first part secured to or  
securable to a harness, a second part connectable to a tether, and a mechanism  
5 to releasably interconnect the first and second components, one of said parts  
having a pair of opposed locking apertures or recesses and said mechanism  
comprising: a pair of locking members each having a rounded or tapered  
locking part sized to be received within a respective said locking aperture or  
recess; and a locking element moveable between a locking position and a  
10 release position, the locking element being configured to urge each locking  
member into a position in which its locking part is received within a respective  
said locking aperture or recess when in said locking position but to allow each  
locking member to move out of said respective locking aperture or recess when  
in said release position.
- 15
2. A fitting according to claim 1, wherein each said locking member is  
constrained for linear movement towards and away from each respective  
locking aperture or recess.
- 20
3. A fitting according to claim 1 or 2, wherein said locking element is  
biased towards said locking position.
4. A fitting according to claim 3, wherein said locking element is biased by  
a spring.
- 25
5. A fitting according to any preceding claim, wherein each said locking  
aperture or recess defines a respective peripheral seat, and the rounded or  
tapered locking part of each said locking member is sized to engage a

respective said seat when urged into said respective locking aperture or recess but not to pass completely through said seat.

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6. A fitting according to claim 5, wherein each said peripheral seat is  
5 substantially circular.
7. A fitting according to any preceding claim, wherein each said locking member is a ball.
- 10 8. A fitting according to any preceding claim comprising a plurality of said pairs of locking apertures or recesses and a plurality of respective pairs of locking members.
- 15 9. A fitting according to any preceding claim wherein the locking element is arranged to urge the locking members of the or each said pair of locking members apart from one another into said respective locking apertures or recesses.
- 20 10. A fitting according to any preceding claim, wherein each locking member is provided in a linear channel to restrict the locking member to substantially linear movement.
- 25 11. A fitting according to claim 10, wherein said locking element is arranged for movement between said locked and release positions along an axis substantially perpendicular to the axis of each said channel.
12. A fitting according to any claim 11, wherein said locking element has a respective bearing surface to bear against each said locking member when the

locking element is in said locking position, and a respective recess to receive each said locking member when the locking element is in said release position.

---

13. A fitting according to any preceding claim, wherein said locking  
5 apertures or recesses are provided in said second part, and said locking members and said locking element are provided on said first part.

14. A fitting according to claim 13 as dependent upon claim 5 or 6, wherein  
each said locking member is held captive between said locking element and a  
10 respective retaining aperture formed in said first part, each said retaining aperture being sized to prevent the respective locking member from passing completely therethrough, whilst allowing the respective locking member to project sufficiently therethrough to engage a respective seat defined on the second part.

15

15. A fitting according to claim 14 as dependent upon claim 6, wherein each said retaining aperture is substantially circular and has a smaller diameter than each said seat.

20 16. A fitting according to any preceding claim wherein said second part has a hook for connection to said tether.

17. A fitting according to any preceding claim having an actuator button configured to urge said locking element towards said release position when  
25 pressed.

18. A fitting according to claim 17, wherein said actuator button is formed as part of said locking element.

19. A fitting according to claim 17 or 18, comprising a guard arrangement  
~~configured to extend at least partly around said actuator button to prevent the~~  
 button from being accidentally pressed.

5

20. A harness provided with a fitting according to any preceding claim.

21. A fitting substantially as herein before described with reference to and as  
 shown in the accompanying representations.

10

22. A harness provided with a fitting substantially as hereinbefore described  
 with reference to and as shown in the accompanying representations.

23. Any novel feature or combination of features disclosed herein.

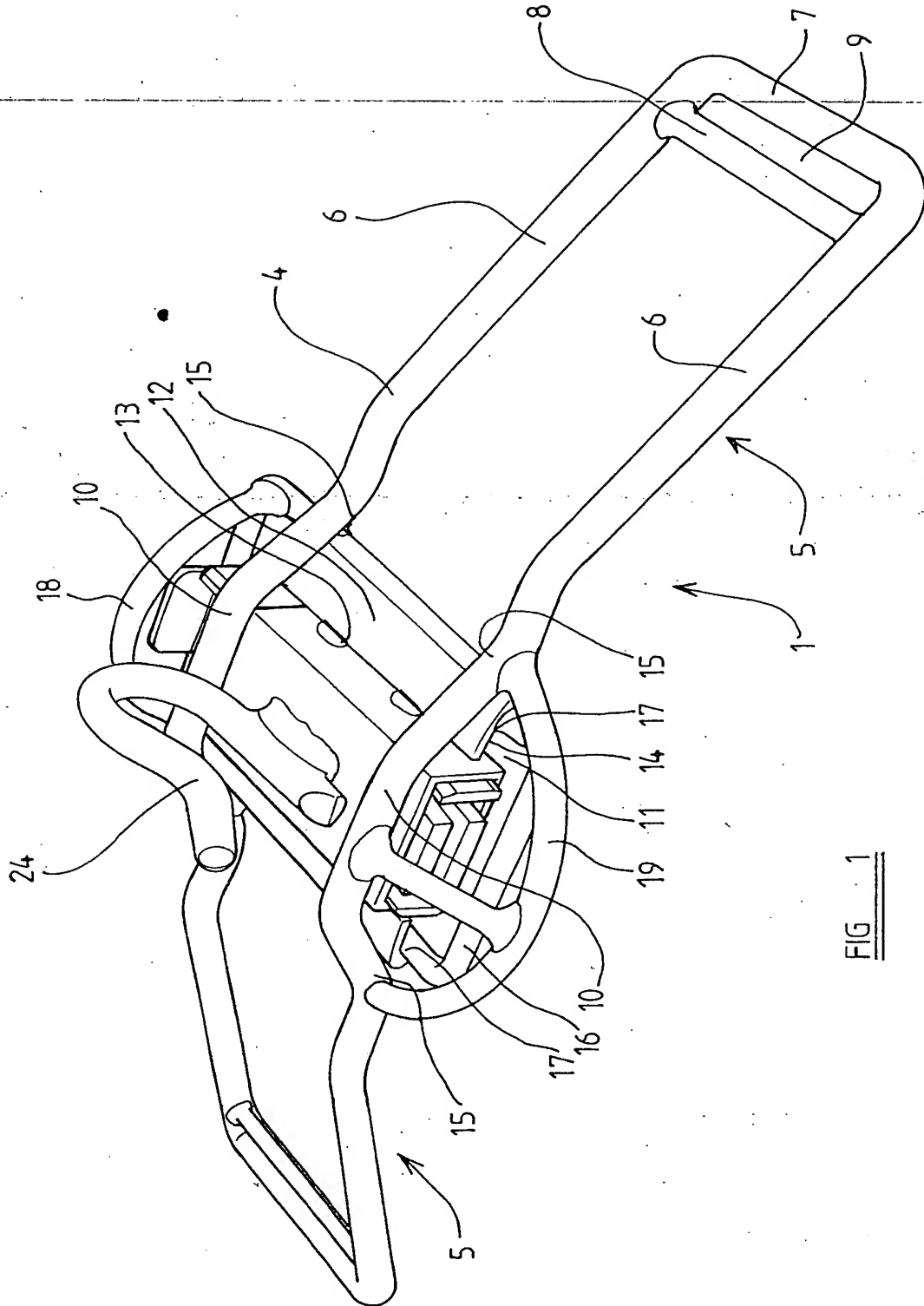
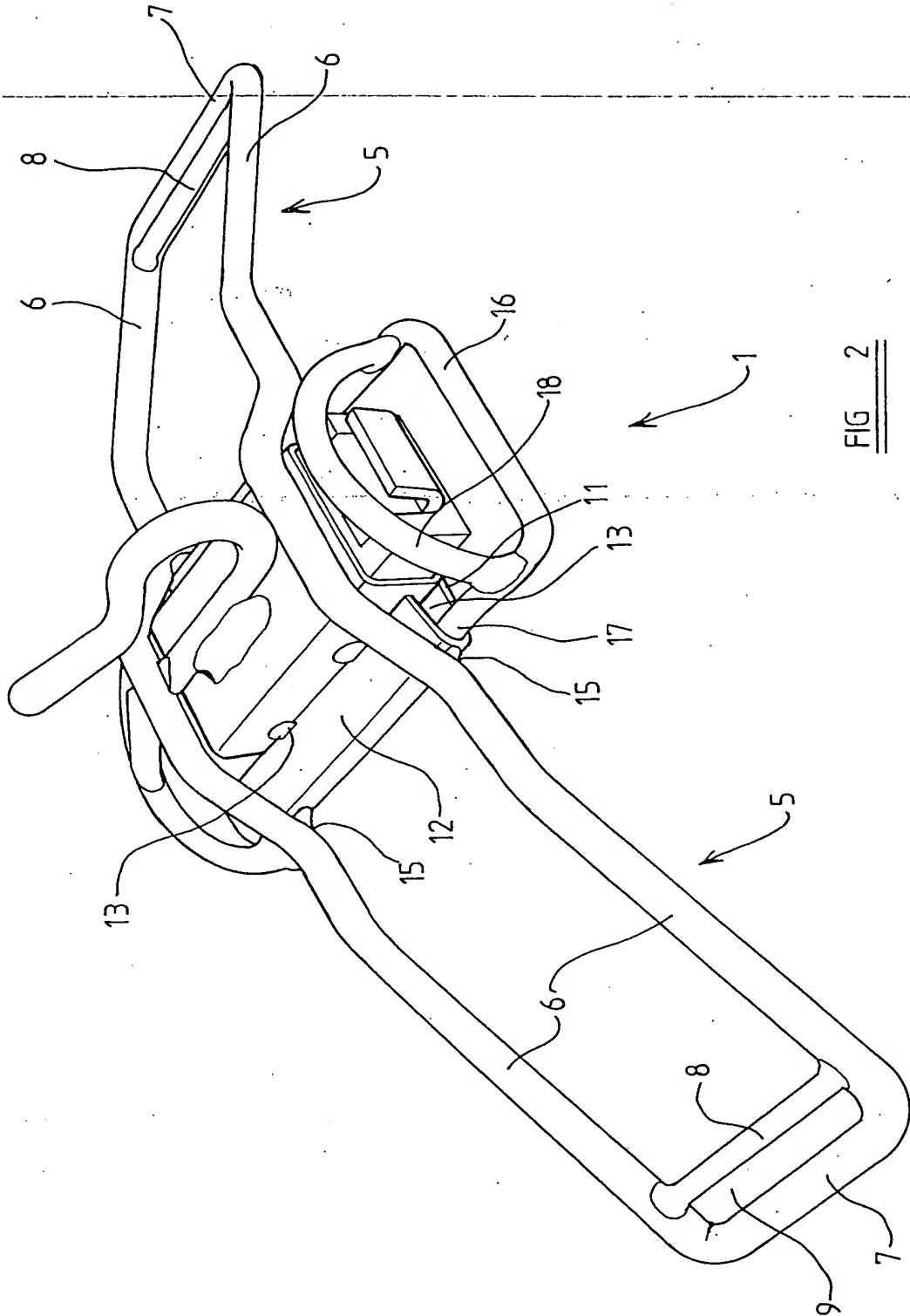


FIG. 1

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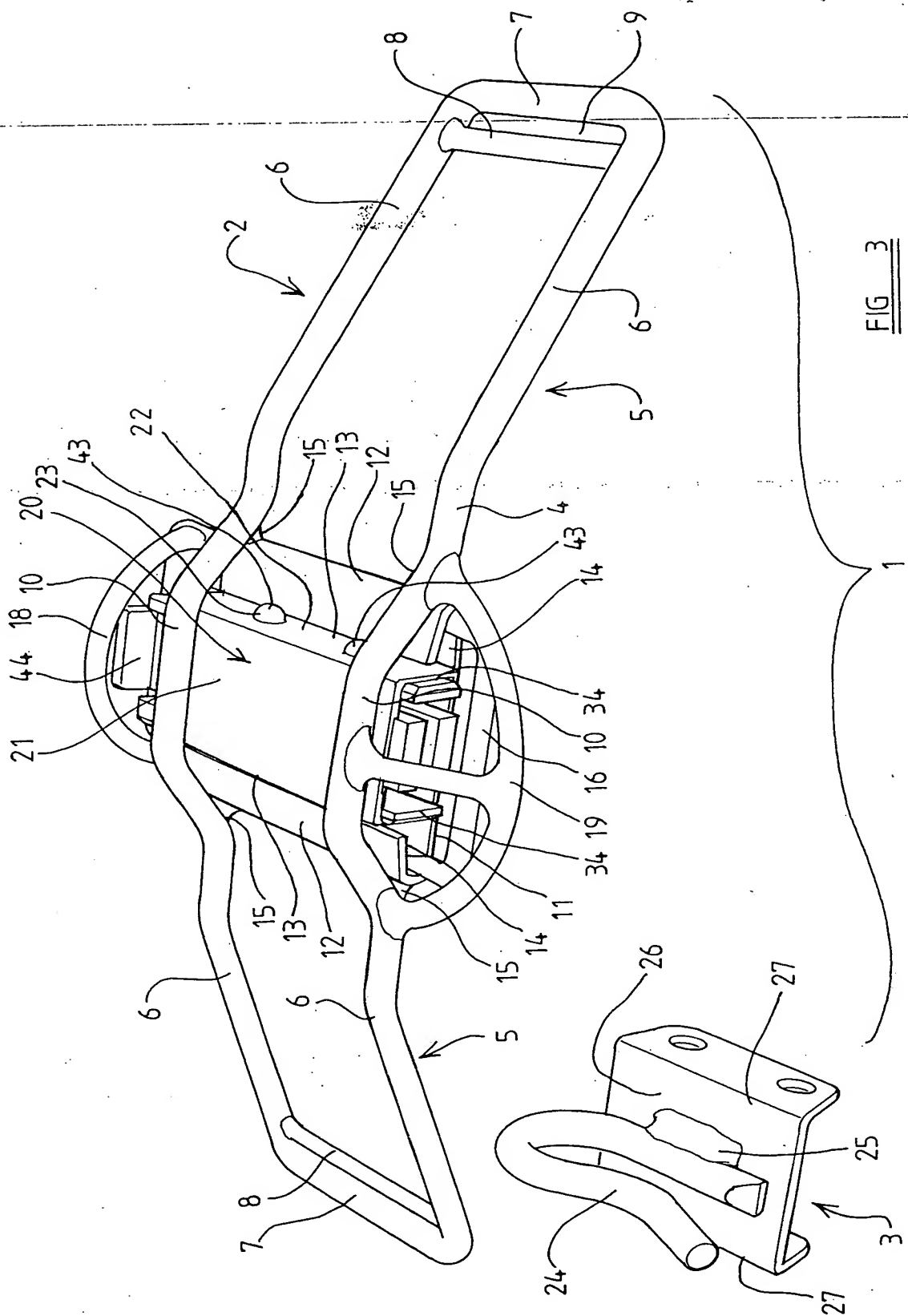


FIG 3

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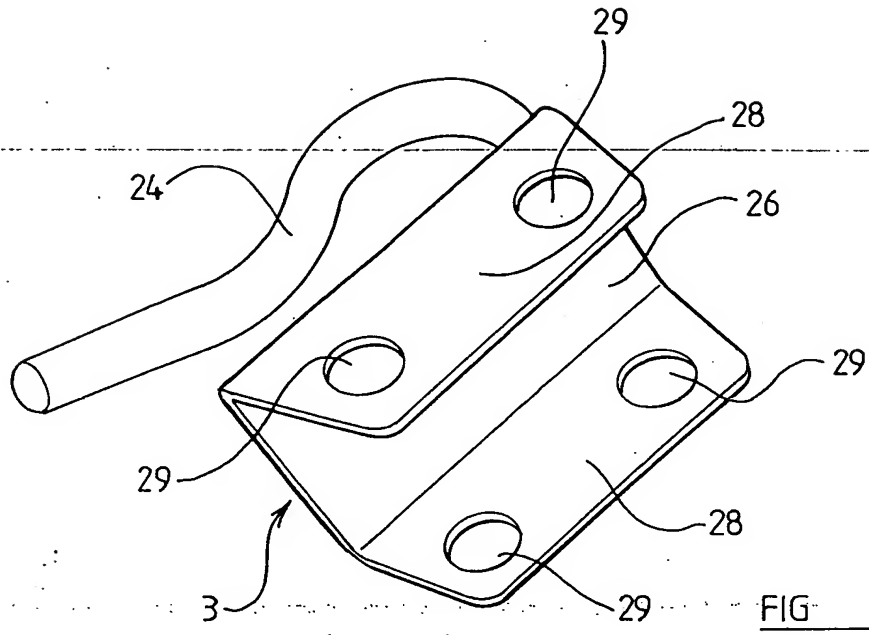
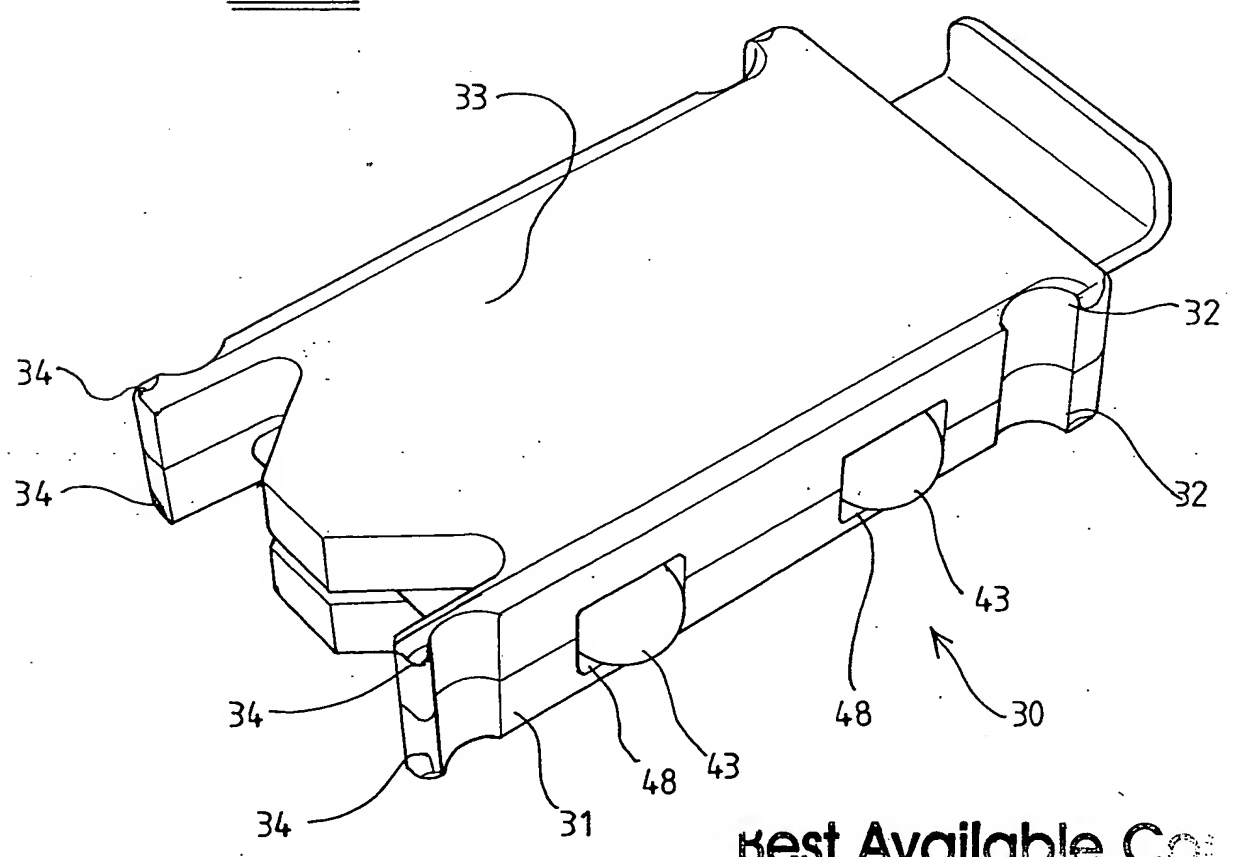


FIG 5



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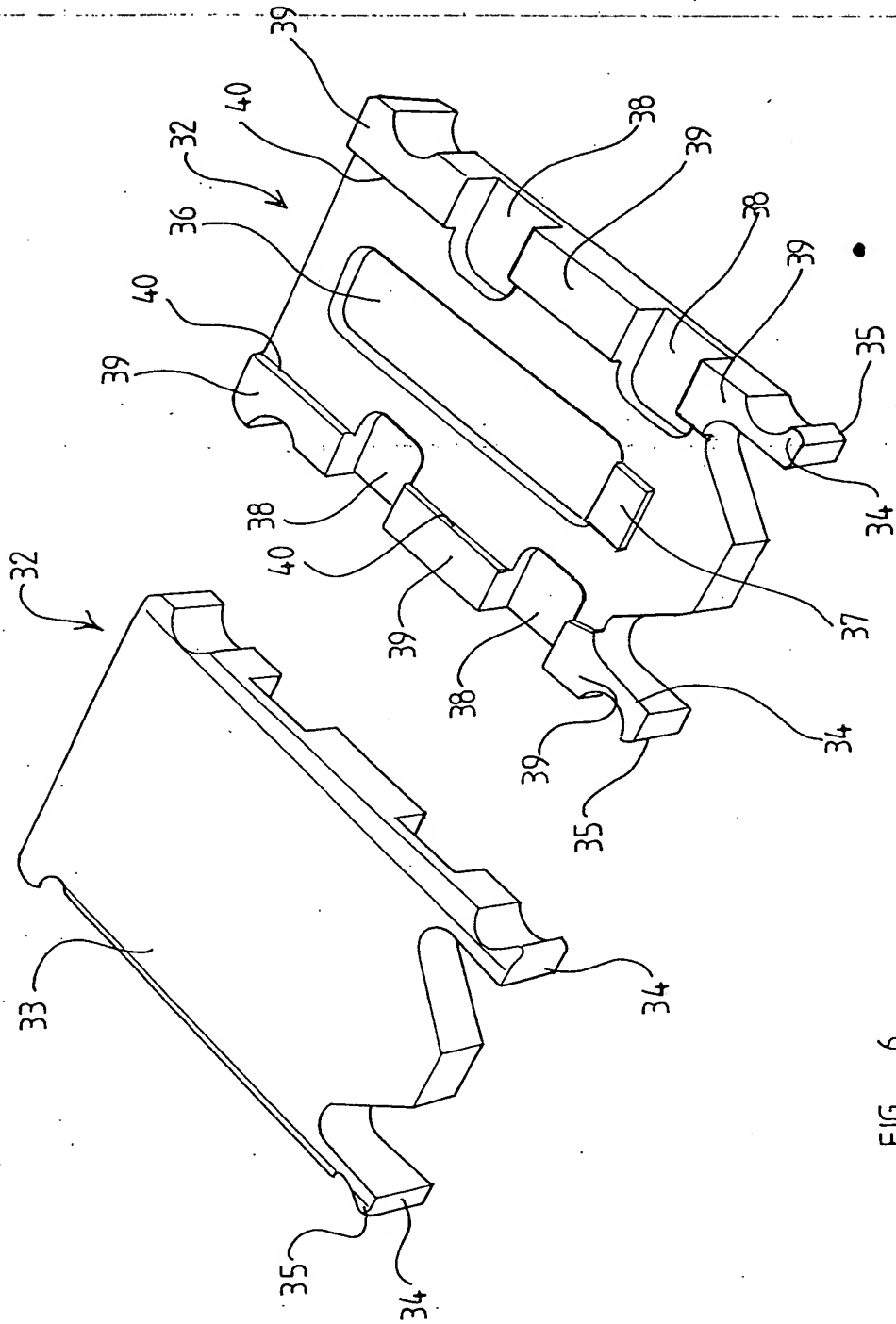
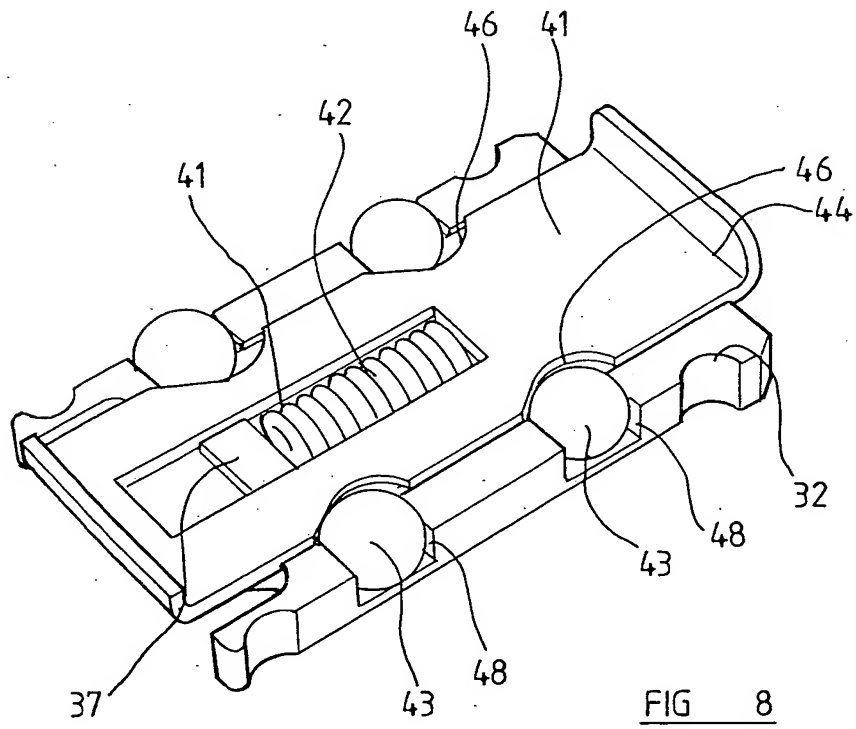
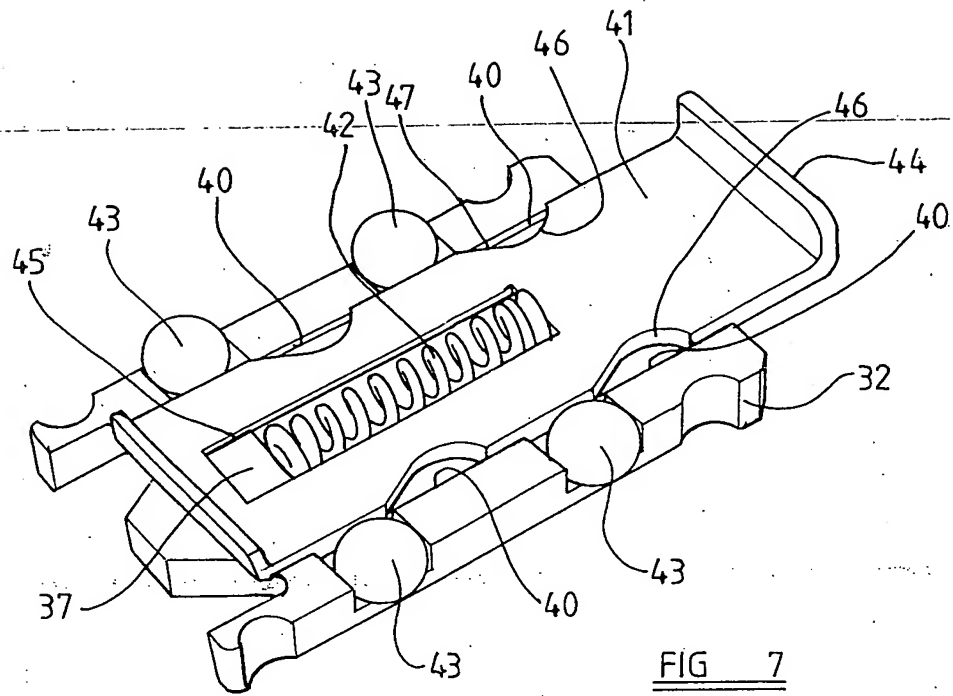


FIG. 6

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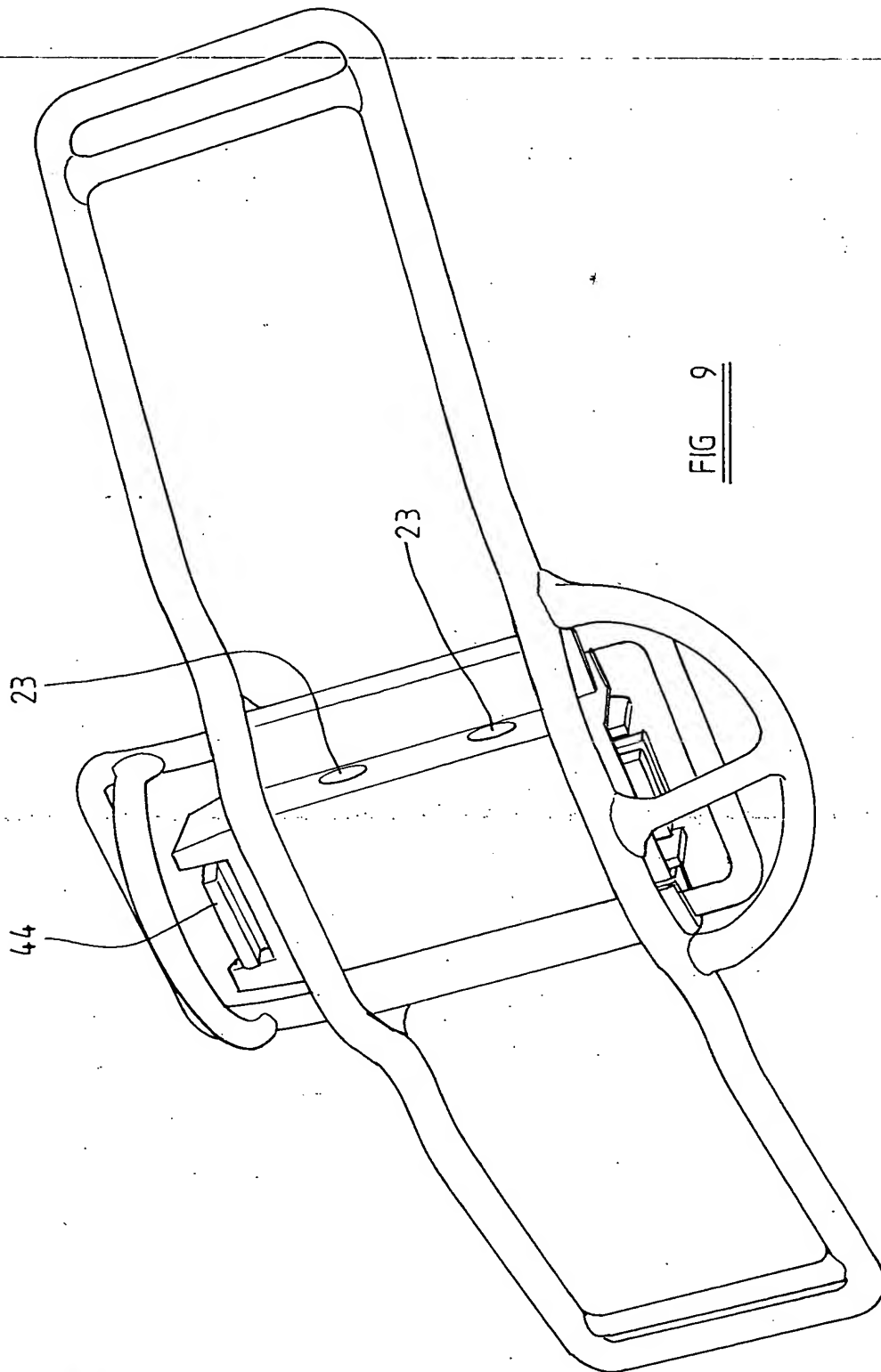


FIG 9

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